



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,676	06/01/2001	Takashi Miki	Q64808	7681

7590 09/18/2002
SUGHRUE, MION, ZINN,
MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, NW
Washington, DC 20037-3213

EXAMINER

TUCKER, ZACHARY C

ART UNIT	PAPER NUMBER
----------	--------------

1624

DATE MAILED: 09/18/2002

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/870,676

Applicant(s)

MIKI ET AL.

Examiner

Zachary C. Tucker

Art Unit

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 2-4, 7 and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 6 and 8-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse to prosecute the invention of Group I (Claims 1, 5 (as it depends from 1), 6 (as it depends from 5 as it depends from 1), 8 (as it depends from 5 as it depends from 1), 9 (as it depends from 1), 10 (as it depends from 1), 11 (as it depends from 1), 12 (as it depends from 1), 13, 14 (as it depends from 1) and 15; in Paper No. 7 is acknowledged.

Claims 2, 3, 4, 5 (as it depends from 2 or 3), 6 (as it depends from 5 as it depends from 2) and 6 (as it depends from 5 as it depends from 3), 7, 8 (as it depends from 5 as it depends from 2) and 8 (as it depends from 5 as it depends from 3), 9 (as it depends from 2 or 3), 10 (as it depends from 2 or 3), 11 (as it depends from 2), 12 (as it depends from 2), 14 (as it depends from 2) and 16; are withdrawn from further consideration as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

Claims 5, 6, 8, 9 and 12-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The substituents R^3 and R^4 are defined in claim 5. These substituents are not present in claim 1, therefore, there is no antecedent basis for the substituents R^3 and R^4 in claim 5 as it depends from 1. Claim 5 as it depends from claims 2 or 3 has been withdrawn from consideration as being directed to a non-elected invention.

Claim 5 is further indefinite due to the word "and" being present between biphenyl and naphthyl. R^1 cannot be both biphenyl and naphthyl at the same time. If applicant wishes to specify that R^1 may be biphenyl or naphthyl, that portion of claim 5 should be amended to read, "...biphenyl group, naphthyl group,..."

Claim 5 has been considered on the merits as though the descriptions of R^3 and R^4 are not present in the claim; they do not apply to claim 5 as it depends from claim 1.

Claims 6 and 8 depend from claim 5, which has been found to be indefinite, therefore claims 6 and 8 are also indefinite.

Claim 8 is further indefinite due to the fact that there is no antecedent basis for the carboxylic acid of formula (7) being referred to in claim 8. The only claim in the instant application specifying a carboxylic acid of formula (7) is instant claim 7, which is not drawn to the elected invention. Thus, claim 8 has not been further considered on the merits.

Claim 9 refers to the "said carboxylic acid activating agent of formula (2)" in claim 1. The carboxylic acid activating agent in claim 1 is designated formula (3). Claim 9 has been examined on the merits as though it referred to the carboxylic acid activating agent as being defined by the formula (3).

Art Unit: 1624

Claim 12 refers to "the amine" in claim 1. There is no antecedent basis for the amine being referred to in claim 1. Claim 12 has been examined on the merits as though "the amine" were replaced by, "the organic base."

Claims 13-15 each depend from claim 1, and further limit, the molar ratio (with respect to the carboxylic acid) of, the identity of, and the order in which the organic base is added to other reagents, respectively. However, each of claims 13-15 refers to the organic base as "the base," which term is broader in scope than "organic base." There is no antecedent basis for any base other than an organic base in claim 1. Claim 10 refers to the base in claim 1 as "the organic base." Claims 12-15 should be amended so as to refer to the base in claim 1 in the same terms.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by E.J. Bourne et al, Journal of the American Chemical Society. pages 2006-2012 (1954).

Bourne et al discloses the synthesis of trifluoroacetyl acetate from trifluoroacetic anhydride and acetic acid in equimolar amounts, catalyzed by pyridine (page 2008, "Experimental").

Claim 1 specifies that the method for producing a mixed acid anhydride of formula (1) comprises adding a carboxylic acid of formula (2) and an organic base to a

Art Unit: 1624

solution of a carboxylic acid activating agent of formula (3). In the Bourne et al reference, the carboxylic acid (2) is acetic acid and the carboxylic acid activating agent (3) is trifluoroacetic anhydride.

Claim 1 does not specify that the carboxylic acid and organic base must be added simultaneously to the solution of the carboxylic acid activating agent of formula (3). In order to make the trifluoroacetic anhydride and acetic acid solution of the Bourne et al reference, acetic acid had to have been added to trifluoroacetic anhydride. Thereafter, organic base (pyridine) was added to the resultant trifluoroacetic anhydride-containing solution.

Claims 1, 5, 9-13 and 15 rejected under 35 U.S.C. 102(b) as being anticipated by Urbanski et al, Polish Journal of Chemistry, vol. 58, pages 1227-1229 (1984).

Urbanski et al discloses the synthesis of mixed sulfonic-carboxylic anhydrides from benzenesulfonyl chloride and various aromatic carboxylic acids. Molar amounts of carboxylic acid, benzenesulfonyl chloride (the carboxylic acid activating agent) and organic base (either pyridine or triethylamine) are equimolar (0.02 mole).

Page 1229 "Mixed carboxylic-sulfonic anhydrides (stage 1)" discloses that the organic base and the carboxylic acid are added simultaneously to the benzenesulfonyl chloride.

Art Unit: 1624

Claims 1, 5, 11 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Gaede, B., Organic Process Research and Development, vol. 3, pages 92-93 (1999). The Gaede reference was published 17 January 1999 (bottom of page 92).

Diethyl chlorophosphate is the carboxylic acid activating agent employed in the Gaede reference. All of the limitations of claims 1, 5, 11 and 15 are disclosed in the section headed "Results" starting on page 92 to page 93 (including *Table 1*) and "General Procedure" on page 93.

Claims 1, 5, 9, 11 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,874,558 (Fife et al).

Fife et al discloses polymeric 4-vinyl pyridine (P4-VP) catalyzed synthesis of mixed anhydrides from carboxylic acid chlorides and carboxylic acids.

In column 4, Example 1 and Table 1 disclose all of the limitations of claims 1, 5, 11 and 15.

Allowable Subject Matter

Claim 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

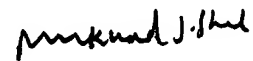
Any inquiry concerning this communication should be directed to Zachary Tucker whose telephone number is (703) 305-2050. The examiner can normally be reached Monday-Friday from 7:00am to 3:30pm. If Attempts to reach the examiner are

Art Unit: 1624

unsuccessful, the examiner's supervisor, Mukund Shah, can be reached at (703) 308-4716. The fax number for the organization where this application or proceeding is assigned is (703) 308-4556 for regular communications and (703) 308-4242 for after-final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

zt



Mukund Shah

Supervisory Patent Examiner

Art Unit 1624